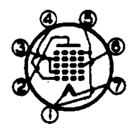
1R5

PENTAGRID CONVERTER

MINIATURE TYPE

Filament	Coated	
Voltage	1.4	d-c volts
Current	0.05	amp.
Direct Interelectrode Capacitances:°		
Grid #3 to All Other Electrodes (R-F Input)	7.0	μμf
Plate to All Other Electrodes (Mixer Output)	7.5	μμf ←
Grid #1 to All Other Electrodes (Osc. Input)	3.8	μμf
Grid #3 to Plate	0.4 max.	μμf
Grid #3 to Grid #1	0.2 max.	μμf
Grid #1 to Plate	0.1 max.	μμf
Maximum Overall Length	2-1/8"	
Maximum Seated Height	1-7/8"	
Maximum Diameter	3/4"	
Bulb	T-5-1/2	
Base▲	Miniature Button 7-Pin	

Pin 1 - Filament -
Pin 2 - Plate
Pin 3 - Grids #2 & #4
Pin 4 - Grid #1



Pin 5 - Filament -
Pin 6 - Grid #3
Pin 7 - Filament +

Mounting Position — BOTTOM VIEW (7AT) — Any

Maximum and Minimum Ratings Are Design-Center Values

CONVERTER SERVICE

Plate Voltage	90 max.	volts
Grids #2 & #4 Voltage	67.5 max.	volts
Grids #2 & #4 Supply Voltage	90 max.	volts
Grid #3 Voltage	0 min.	volts
Total Zero-Sig. Cathode Current	5.5 max.	ma. ←

Typical Operation and Characteristics:

Plate Voltage	45	67.5	90	90	volts
Grids #2 & #4 Voltage	45	67.5	45	67.5	volts
Grid #3 Voltage	0	0	0	0	volts
Grid #1 Resistor	0.1	0.1	0.1	0.1	megohm
Plate Resistance	0.6	0.5	0.8	0.6	approx. megohm
Conversion Transcond.	235	280	250	300	μmhos
Grid #3 Bias for Conver. Transcond. of approx. 5 μmhos	-9	-14	-9	-14	volts
Plate Current	0.7	1.4	0.8	1.6	ma.
Grids #2 & #4 Current	1.9	3.2	1.9	3.2	ma.
Grid #1 Current	0.15	0.25	0.15	0.25	ma.
Total Cathode Current	2.75	5	2.75	5	ma.

NOTE: The transconductance between Grid #1 and Grids #2 & #4 tied to plate (not oscillating) is approximately 1400 μmhos under the following conditions: Grid #1 & #3 at 0 volts; Grids #2 & #4 and plate at 67.5 volts.

° With no external shield.

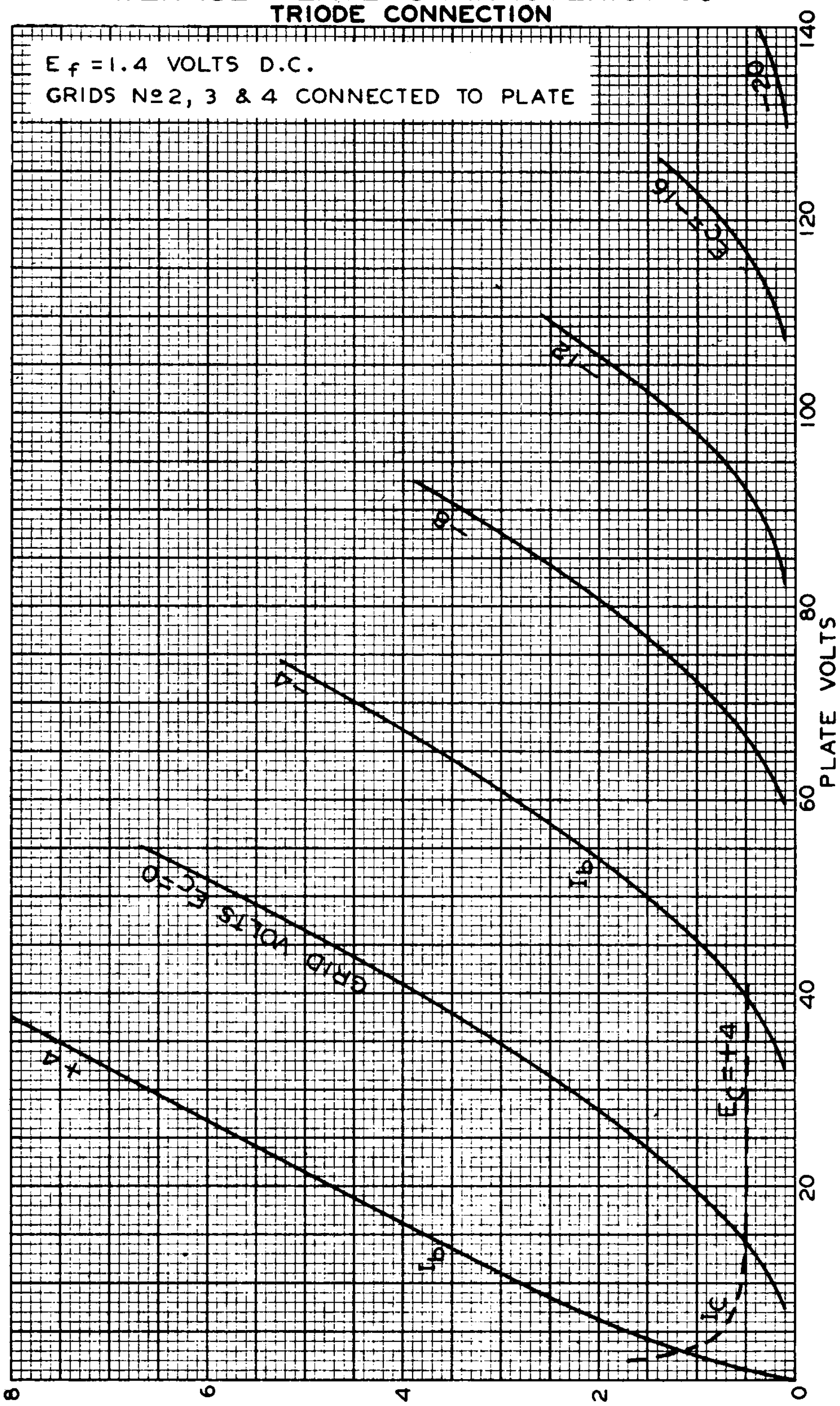
▲ The center hole in sockets designed for this base provides for the possibility that this tube type may be manufactured with the exhaust-tube tip at the base end. For this reason, it is recommended that in equipment employing this tube type, no material be permitted to obstruct the socket hole.

← Indicates a change.

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AVERAGE PLATE CHARACTERISTICS

TRIODE CONNECTION



MAY 4, 1942

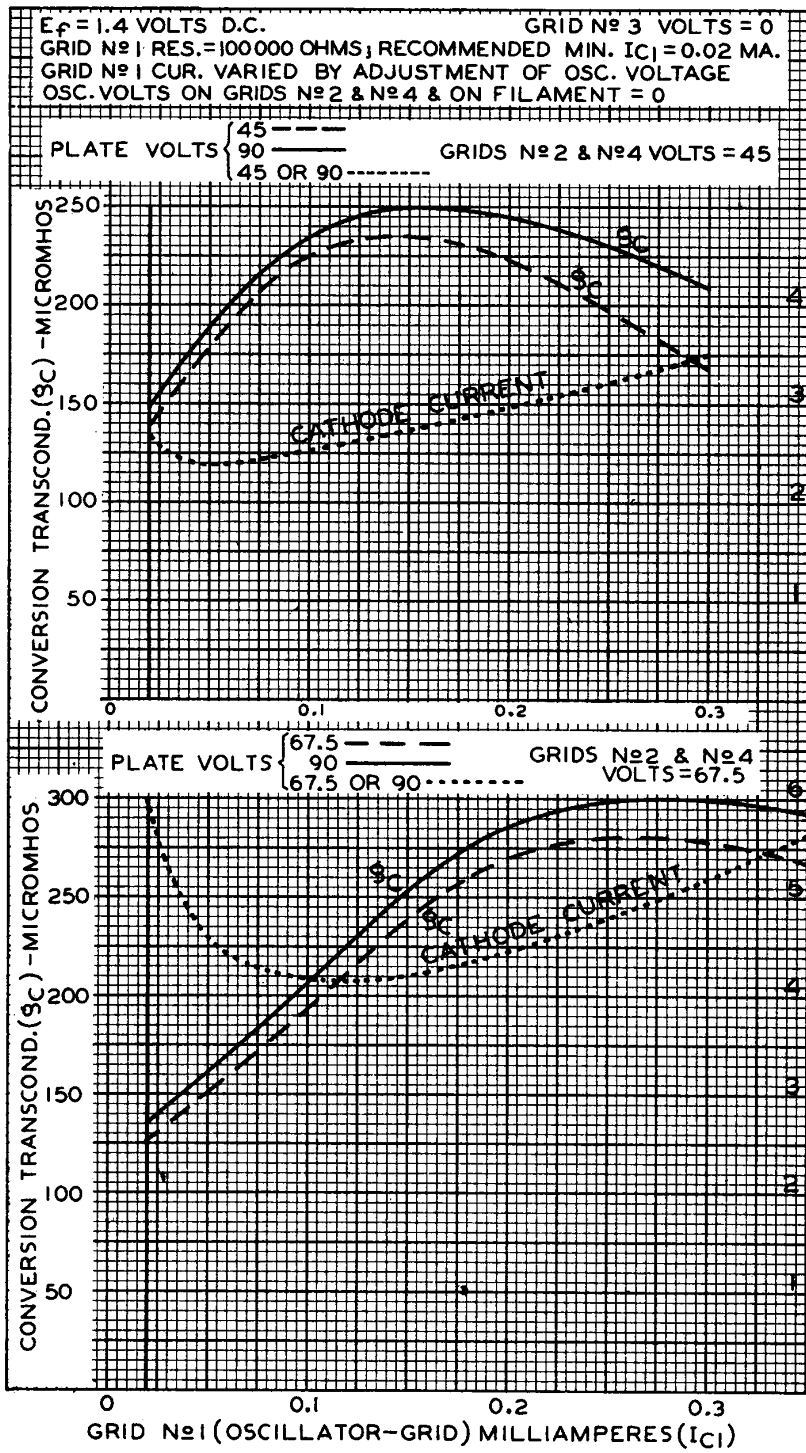
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92C-6350R1

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OPERATION CHARACTERISTICS



MAY 30, 1940

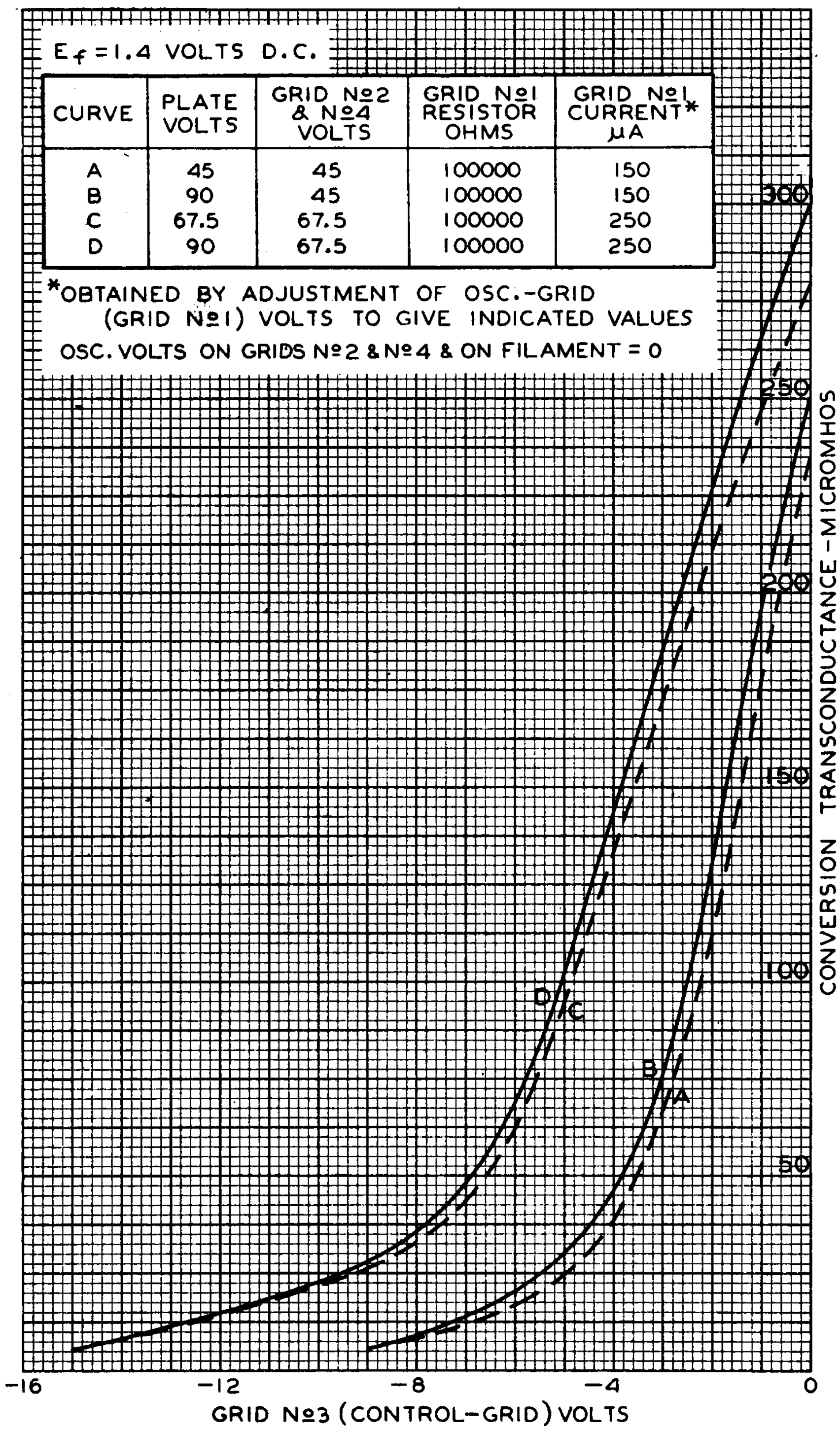
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RCA MANUFACTURING COMPANY, INC.

92C-6098R1

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OPERATION CHARACTERISTICS



E_f = 1.4 VOLTS D.C.

CURVE	PLATE VOLTS	GRID №2 & №4 VOLTS	GRID №1 RESISTOR OHMS	GRID №1 CURRENT* µA
A	45	45	100000	150
B	90	45	100000	150
C	67.5	67.5	100000	250
D	90	67.5	100000	250

*OBTAINED BY ADJUSTMENT OF OSC.-GRID (GRID №1) VOLTS TO GIVE INDICATED VALUES

OSC. VOLTS ON GRIDS №2 & №4 & ON FILAMENT = 0